170393

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

27

REPLY TO THE ATTENTION OF:

17 FEB 1988

5HE-12

Mr. Andrew A. Perellis
Gessler, Wexler, Flynn, Laswell
& Fleischmann, Ltd.
Three First National Plaza
Suite 2300
Chicago, Illinois 60602

Re: American Chemical Service Warszyn Engineering Work Plan

Dear Mr. Perellis:

This letter is to provide you with the U.S. Environmental Protection Agency (EPA)/Indiana Department of Environmental Management comments on the American Chemical Services Warzyn Engineering Work Plan.

Attached please find comments from the Department of the Interior.

A general comment for the entire Work Plan is that the definition of on-site versus off-site needs to be clearly spelled out early and then closely followed throughout. Currently, the definitions seem ambiguous and have a tendency to change from Section to Section.

Page ES-1, Second Paragraph: The objective of the RI/FS shall be to evaluate the nature and extent of contamination. Add that the contaminant(s) may be either on-site or the contaminant(s) may have migrated off-site.

Page ES-2: Please shorten completion of RI/FS from 24 months to 22 months with the 2 month difference to be taken from the FS schedule.

Page 1-3, Section 1.3, First Bullet: Change to "...public health, welfare, or the environment."

Page 1-4, Section 1.3: "The seventh section presents.." There was no seventh section included in the Work Plan.

Page 2-1, Section 2.1.1, First Paragraph: Eliminate the sentence "Surface elevations range from 635 to 650 feet above Mean Sea Level (MSL)."

Page 2-2, Section 2.1.1, Sixth Paragraph: Show marshes on map (i.e., the natural surface water drainage pond noted to be west of the site is not shown in Figure 4-1).

Page 2-2, Section 2.1.1: Add this sentence to end of Sixth Paragraph "In general, the sediments underlying Griffith contain a great reservoir of fresh water and also have a great potential for contamination (Indiana DNR, 1975)."

Page 2-3, Section 2.1.1, Eigth Paragraph: Change "..regional flow in Unit 2.." to "..regional flow in Unit 3..".

Page 2-7, Section 2.3.1, Third Paragraph: Please put in date of Lake County Health Department groundwater sampling program.

Page 2-7, Section 2.3.2, Second Paragraph: Show creek on map.

Page 2-8, Section 2.4, Second Paragraph: Please include discussion regarding O'Niel well or include a sentence summarizing findings on O'Niel well (see Roy F. Weston Work Plan, Page 2-11 of 11).

Page 3-1, Section 3.1, Remedial Alternative 1: Please include "On-Site Treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants" along with Off-Site Treatment and do not exclude this in Feasibility Studies.

Page 3-2, Section 3.2, First Paragraph: Change "..such as Safe Drinking Water Criteria.." to "..such as Maximum Contaminant Levels/Maximum Contaminant Level Goals under the Safe Drinking Water Act, water quality criteria under section 304 or 303 of the Clean Water Act, State Water Quality Criteria Standards or State ARARs, RCRA regulations or other applicable and relevant guidelines, regulations, or standards may apply."

Page 3-3, 2.: The institutional factors evaluation should also consider the permanent reduction through mobility, toxicity, or volume (M,T or V) as required by Section 121 of SARA.

Page 3-4, Section 3.3, 2.: Include short-term and long-term uncertainties associated with land use; the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constiuents.

Page 3-4, Section 3.3, 3.: The environmental and public health factors evaluation should also address the short-term and long-term risks associated with implementing the specific alternative. (See Superfund Public Health Evaluation Manual.)

Page 3-4, Section 3.3, 3.: Change "...at the site is to respond to existing.." to "...at the site is to respond to and, if feasible, rectify any existing...".

Page 3-4, Section 3.3, 3.: Add "...potentially affect public health, welfare, or the environment in the area".

Page 3-4, Section 3.3, 4.: The cost effectiveness evaluation states that a present worth method will be utilized for cost comparison purposes. Present worth comparisons will only yield useful results when the alternatives have equal life expectancies and don't need to be replaced, similar O&M schedules, and are comparable. If these conditions are not present, it may be necessary to utilize some other form of comparison to realistically evaluate the alternatives on the basis of cost. Also, change "...acceptable to EPA" to "...approved by EPA."

Page 3-6, Section 3.4, 3.: Change "Characterization of.." to "A more detailed characterization of...".

Page 3-6, Section 3.4, 4.: Change "Characterization of.." to "A more detailed evaluation of...".

Page 3-7, Section 3.5, Fourth Bullet: Add "Evaluate the present and future risk and potential for harm..."

Page 3-7, Section 3.5, Sixth Bullet: Add "..regulatory requirements and guidelines."

Page 3-7, Section 3.5, Seventh Bullet: Add "...and the most cost effective."

Page 4-2, Phase I - Remedial Investigation, I.A.4.a.: Add "Domestic wells including Commercial and Residential wells".

Page 4-2, Phase I - Remedial Investigation, I.B.: Add "Define Site Boundaries in concurrence with U.S. EPA, DOI, and IDEM."

Page 4-2, Phase I - Remedial Investigation, I.C.1.b.: Please identify the "off-site" containment area or areas. This is not shown in Figures 2-1 or 4-1 through 4-5.

Page 4-4, Section 4.1.1, Second Paragraph: Add "Coordinate these interviews with U.S. EPA since depositions may be needed."

Page 4-5, Section 4.1.1, Third Paragraph: Add "...municipal and industrial wells within a one-mile radius, unless results indicate contamination appears to be extending beyond one-mile, of the ACS site...".

Page 4-5, Section 4.1.1, Third Bullet: Add "...upper or lower aquifer below the ACS site, screening intervals and method of construction, if possible."

Page 4-6, Section 4.1.2, Third Paragraph: "Site (ground) elevation data will be collected at selected grid points..." Further discussion is necessary regarding the site elevation survey and the selection of grid points that will be used. Please show locations on a map.

Page 4-6, Section 4.1.3: Add "...will involve the use of a magnetometer, if feasible, to locate...". Change the word "Treatment Point" to "Treatment Pond". The Work Plan should state specifically that the magnetometer will be used where technically feasible. In addition, other geophysical methods should be described if they are to be used as back up or replacement technologies to the magnetometer.

Page 4-6, Section 4.1.5: Add "Also, coordinate this environmental audit with the U.S. EPA and the State of Indiana RCRA personnel. Obtain starting information from pending RCRA permit, the ATEC January 15, 1986 report, the Subsurface Soil Exploration of Griffith Sanitary Landfill November 7, 1986, and any other available reports."

Page 4-7, Section 4.1.6: "From this list, a short list will be developed, containing only the remedial procedures which are viable for the specific hazardous compounds.." This should probably be placed in Task 2 or 4. Also, eliminate the word "specific" since the alternatives shall meet all applicable relevant and appropriate requirements for the hazardous constituents present.

Page 4-7, Section 4.1.6: Move the Second Paragraph from Section 4.1.7 "The original complete list and the short list of..." to the end of Section 4.1.6.

Page 4-7, Section 4.1.7, Second Paragraph: Move "The original complete list..." to become the last paragraph of Section 4.1.6.

Page 4-7, Section 4.2: Please reorganize Section 4.2 so the discussion follows the II. Task 2 Hydrologic Investigation format shown on Page 4-3. Paragraphs should discuss all 2A. items and then all 2B. items.
Section 4.2.1: Task 2A
Section 4.2.2 - First Paragraph: Task 2B
Section 4.2.2 - Second Paragraph: Task 2B
Section 4.2.2 - Third Paragraph: Task 2B (continues to page 4-9)
Section 4.2.2 - Fourth Paragraph: Task 2B
Section 4.2.2 - Fifth Paragraph: Task 2A
Section 4.2.2 - Sixth Paragraph: Task 2A (page 4-10 top paragraph)
Section 4.2.2 - Seventh Paragraph: Task 2A
Section 4.2.2 - Eighth Paragraph: Task 2A
Section 4.2.2 - Ninth Paragraph: Task 2A
Section 4.2.2 - Tenth Paragraph: Task 2A
Section 4.2.2 - Eleventh Paragraph: Task 2A (page 4-11 top paragraph)
Section 4.2.2 - Twelfth Paragraph: Task 2A
Section 4.2.2 - Thirteenth Paragraph: Task 2A
Section 4.2.2 - Fourteenth Paragraph: Task 2A
Section 4.2.2 - Fifteenth Paragraph: Task 2B (continues to page 4-12)
Section 4.2.2 - Sixteenth Paragraph: Task 2B
Section 4.2.2 - Seventeenth Paragraph: Task 2B
Section 4.2.2 - Page 4-14, 1.: Task 2A
Section 4.2.2 - Page 4-14, 2. and 3.: Task 2B

Page 4-8, Section 4.2.2, First Paragraph: "Private water supply wells will be sampled as a precaution of protection.....contamination in the lower aquifer" Private water wells set in the upper aquifer should also be sampled. Later in the text this is stated, but it should also be stated here.

Page 4-8, Section 4.2.2, Fifth Bullet: "Characterize the aerial.." change to "Characterize the areal...".

Page 4-9, Section 4.2.2, Fourth Paragraph: "...analysis of groundwater samples from six newly installed wells,.." This number of monitoring wells should be considered a minimal number of wells, additional monitoring wells may need to be installed at a later Phase of the study. If the saturated thickness is greater than 10 feet, it will be necessary to install two wells at each location in order to obtain a discrete sample from the top and bottom of the upper aquifer (for contaminants that are floaters or sinkers). One well would be screened at the top of the upper aquifer and the second well would be screened at the bottom. Sampling of the piezometers in addition to sampling of the monitoring wells should be outlined in order to insure good characterization of the contaminants.

Page 4-9, Section 4.2.2, Fourth Paragraph: "from six newly installed wells, 10 private wells..." This will not be a sufficient number to obtain up-gradient and down-gradient residential, commercial, and industrial wells screened in both the upper and lower aquifer. Please map all residential, commercial, and industrial wells in the area and show on the map the region where there is a suspected groundwater divide, then select wells to be sampled. This number shall be in the range of 20 to 30 wells.

Page 4-10, Section 4.2.2. Ninth Paragraph: "During Task 2, six monitoring wells will be installed.." please correct this statement to match comment from the first comment regarding Page 4-8, Section 4.2.2, Fourth Paragraph. Also, Figure 4-2 is discussed before Figure 4-1.

Page 4-10, Section 4.2.2, Tenth Paragraph: "The groundwater grid will include six off-site-perimeter monitoring wells..." Please show these locations on a map. Figure 4-2 shows only six on-site wells.

Page 4-10, Section 4.2.2, Tenth Paragraph: "Slug tests, bail tests, or pump tests will be conducted to determine the hydraulic properties of the aquifer." Please indicate how many and identify tenative locations to be used.

Page 4-11, Section 4.2.2, Tenth Paragraph: Please state how piezometers will be secured in field to avoid tampering.

Page 4-11, Section 4.2.2, Eleventh Paragraph: "It is anticipated that water levels in the piezometers would be measured several times during the course

of the RI." Please provide an exact timing sequence, i.e. monthly, etc. or planned sequence/schedule as to when this will be done.

Page 4-11, Section 4.2.2, Thirteenth Paragraph: "The information will be synthesized using a groundwater flow model." Please expand and discuss the model in more detail.

Page 4-12, Section 4.2.2, Fifteenth Paragraph: Change "...eleven paris.." to "...eleven pairs...". Also, this does not appear to be consistent with those as shown on Figure 4-3.

Page 4-12, Section 4.2.2, Fifteenth Paragraph: "..connecting the marsh to Turkey Creek (locations 5,7,8,9)..." Location 5 is wrong and should be eliminated from this list.

Page 4-12, Section 4.2.2, Sixteenth Paragraph: "...newly installed monitoring wells, 10 private wells..." Please see comment for Page 4-8, Section 4.2.2, Fourth Paragraph.

Page 4-14, Section 4.2.2, 1.: Change "..stratigraphy and aerial" to "stratigraphy and areal". Also, change "..hydrostratigraphic units and aerial" to "..hydrostratigraphic units and areal".

Page 4-14, Section 4.2.2, 2.: "..identification of contaminant levels in all three hydrostratigraphic units.." Based on the proposed Task 2 in your Work Plan, this is not accurate as only the upper stratiographic unit will have been investigated (upper aquifer). Please note this phased study shall be required to eventually investigate all three hydrostratigraphic units.

Page 4-14, Section 4.3, First Paragraph: "...Drum Storage Area and possibly with the old Kapica..." change to "...Drum Storage Area and possibly within the old Kapica..."

Page 4-15, Section 4.3, Third (Top) Paragraph: Change "...drilling of 14 soil.." to "...drilling a minimum of 14 soil.." and change "...waste borings and excavation of six waste pits" to "...waste borings and excavation of a minimum of six waste pits.".

Page 4-15, Section 4.3, Third (Top) Paragraph: "..be necessary to conduct RCRA tests on some samples..." Please explain and clarify which RCRA tests will be done and on which samples.

Page 4-15, Section 4.3, Fourth Paragraph: "In each test pit, one composite waste and.." The Roy F. Weston, Inc. Work Plan specified 3 composite waste samples per test pit. One waste sample per test pit is not sufficient due to the wide variety of compounds disposed of in each area. At a minimum, two waste samples per pit will be required to provide comparison data and based on field conditions present at the time possibly 3 waste samples per pit may be required in some instances.

Page 4-16, Section 4.3, Fifth Paragraph: "...Off-Site Drum Containment Area (Location C) with one composite waste sample..." and "...Kapica Drum Site (Location L)....One composite waste sample and.." The Roy F. Weston, Inc. Work Plan specified 5 composite waste samples from each boring at Location C and 3 composite waste samples from each boring at Location L. At a minimum at least 3 waste samples should be taken at Location C and 2 waste samples should be taken at Location L. However, this must be increased if specific pockets of waste are found via HNu reading, visually via discoloration, etc..

Page 4-16, Section 4.3, Sixth Paragraph: "at five discrete sites at one depth intervals - 6 to 18 inches." The bottom of the contamination zone needs to be identified. If there is no discoloration, HNu/OVA readings are negligible, and lab analysis shows background levels, then deeper sampling will not be needed. If this is not the case, then samples will need to be taken at the 18 to 24 inch depth, and possibly deeper until the contamination area is identified. This needs to be clearly stated in your Work Plan.

Page 4-17, Section 4.3, Sixth Paragraph: Add "..the site of a previous spill/ fire (Location R) - at the same depth interval (6 - 18 inches)" (See previous comment and modify this statement accordingly.)

Page 4-17, Section 4.3, Seventh Paragraph: Change "...general data regarding aerial" to "...general data regarding areal".

Page 4-17, Section 4.3, Seventh Paragraph: "In each soil boring, samples from depths of 2-2.5 feet and 4-4.5 feet" This is sufficient if the boring is installed at the same location as the soil sample areas. If not, then the 1-1.5 foot interval should be collected. Again, the bottom of the contaminated area must be found and verified with samples.

Page 4-17, Section 4.3, First Bullet: Change "...areas and type and extend" to "...areas and type and extent".

Page 4-17, Section 4.4.1, First Paragraph: Change "..it is anticipated that up to 12 new monitoring wells" to "...it is anticipated that a minimum of 12 new monitoring wells, and if field parameters indicate, possibly more than 12 new monitoring wells will be installed upon U.S. EPA approval in Task 4." This must be flexible and U.S. EPA must be involved in this decision process.

Page 4-18, Section 4.4.1, First (Top) Paragraph: Change "Although the need for and location of the wells..." to "Although the need for location and number of the wells...".

Page 4-18, Section 4.4.1, First (Top) Paragraph: Change "...additional shallow wells and up to eight of the wells..." to "...additional shallow wells and eight of the wells...". Also change "...additional shallow wells and up to four of the wells.." to "...additional shallow wells and four of the wells...".

Page 4-18, Section 4.4.1, First (Top) Paragraph: Change "It is anticipated that some of the wells will only be sampled for indicator compounds." to "After all wells have been sampled for a full target list analysis, it may be anticipated that at a minimum 1/2 of all wells will be resampled for full target list compounds and that some of the remaining unsampled wells, with U.S. EPA approval, will only be sampled for indicator compounds." Also, please indicate the method(s) to be used to select the indicator compounds.

Page 4-18, Section 4.4.2: Eliminate "Unless circumstances otherwise dictate". Then add "samples will only be tested for indicator compounds only with U.S. EPA approval."

Page 4-19, Section 4.4.3: Add last sentence, "If indicated, a pump test may also be done."

Page 4-20, Section 4.4.3: Add last bullet: Brief discussion of Phase III stating that additional work may be required and will be subject to U.S. EPA approval. Examples are additional wells that may be required, environmental sampling that may be required, and additional resampling of existing wells, etc.

Page 4-23, Section 4.7.3, Last Bullet: Change "...from the march.." to "...from the marsh...".

Page 4-27, Section 4.8.4, 3.: Add "Consumption of contaminated water and sediment by wildlife..".

Page 4-27, Section 4.8.5: Change "These toxicity summaries will use the reviews in EPAs Ambient Water Quality Criteria (AWQC) documents published in 1980 as the initial basis" to "Toxicity summaries should be obtained from the Integrated Risk Information System (IRIS) initially." Also add "...and will supplement this information with more recently updated information on toxicity and human health from the EPA's verified reference doses (RfDs) evaluations by EPAs carcinogenic assessment group (CAG) and health effects assessments (HEA) documents."

Page 4-28, Section 4.8.5, Second Paragraph: Eliminate the sentences "For noncarcinogenic chemicals, exposure.....will be taken into account."

Page 4-32, Section 4.10, Second Paragraph: Change "The project staff will prepare a "kick-off" fact sheet announcing the intiation.." to "The project staff will participate in a "kick-off" meeting announcing the initiation.."

Page 4-34, Section 4.12.3: Add "Alternate monthly meetings will be held".

Page 5-1, Section 5.1.1, (3): Add "(3) removal and off-site and on-site treatment and disposal.."

Page 5-2, Section 5.1.1, First Bullet: Add "at an off-site and on-site facility approved under RCRA. Such a facility must also comply with all other applicable EPA standards (eg. Clean Water Act, Clean Air Act, TSCA.)."

Page 5-2, Section 5.1.1, Second Bullet: Change "...environmental requirements" to "...environmental standards, policy or guidance."

Page 5-2, Section 5.1.1., Third Bullet: Change "...environmental requirements" to "...environmental standards, policy or guidance."

Page 5-2, Section 5.1.1: The screening must consider and address all of the following items: 1) the contaminant(s) of concern, 2) the concentrations of the contaminant(s), 3) the extent of the spread of the contaminant(s), 4) the characteristics of the contaminant(s), 5) potential pathways and receptors, and 6) acceptable concentrations of the contaminants. Currently this section as well as Table 5-1 are not clear with respect to these issues.

Page 5-3, Section 5.2.1: Eliminate "..compatible with site and source conditions." Add "..are not based on proven technology or are not compatible with site and waste source conditions including alternatives that might be difficult to construct under site conditions."

Page 5-4, Section 5.2.2.1, First Bullet: Add "... surface water or groundwater quality, including reduction of mobility, toxicity, or volume of the contaminant(s)."

Page 5-5, Section 5.2.2.2: Add "...of concern for public health at ACS and evaluate any other factors or potential factors that may be of concern as is necessary."

Page 5-6, Section 5.2.4: Eliminate "The ratio of captial costs to the monitoring and maintenance costs will be considered." For a comparison of costs, the use of a ratio of captial cost to O&M costs is not advised. A comparison based on annualized costs or a net present value comparison would provide more useful information.

Page 5-7, Section 5.2.5: Change "..for Agency information" to "...for Agency approval".

Page 5-7, Section 5.3.1: Add "..will include the following..".

Page 5-11, Section 5.3.6: Change "...for Agency information." to "...for Agency approval".

Page 5-11, Section 5.4.1: Add last bullet: "Ability to meet ARARs".

Page 5-11, Section 5.4.2.: "The most cost effective recommendation..." Please expand to describe what sort of criteria will be used to determine cost effectivesness and explain the type of cost comparison to be used.

Page 5-12, Section 5.4.4: Add "Compliance with CERCLA, RCRA, the NCP, and State ARARs will be a requirement in the possible implementation of any alternatives."

Page 5-12, Section 5.4.6.: Change "...for Agency information" to "...for Agency approval".

Page 5-12, Section 5.5.1: Add "The draft report will be submitted to U.S. EPA, DOI, and IDEM for review."

Page 5-13, Section 5.5.2: Add "The report will be submitted to IDEM, DOI, and U.S. EPA for final review."

Page 5-13, Section 5.5.3: Add "..responsiveness summary will be prepared by U.S. EPA following this public comment period."

Page 5-17, Section 5.9.1: The content of the progress reports is defined in the Consent Decree. This Section should be cross-checked against the appropriate Section(s) in the Decree to assure consistency.

Page 6-1: The time frames as shown here are not consistent with those as outlined in the executive summary.

Comments for Tables and Figures are placed here.

Table 4-1:
Add "Phase I unfiltered", Investigative 2, Duplicate 1, Blank 1
Eliminate the word "Round" and replace with the word "Phase".
Correct Phase II filtered to Investigative 18 (Phase I = 6 and Phase II = 12; therefore: 6 + 12 = 18)
Note that Phase I filtered and Phase II filtered will double if two wells are installed at each of the 6 locations.
Figure 4-1 only shows 10 locations for Surface Water Points, not 11, and Figure 4-3 only shows 10 locations for Proposed Surface Water and Sediment Sampling Points, not 11
Private Wells (PW) unfiltered should be increased, see comment Pg 4-8, Sec. 4.2.2
Leachate (LE) shows Investigative 4, but Figure 4-1 shows 8 leachate wells please explain the discrepancy
Please correct Subtotal sums
Please correct Chemical Subtotal sums
Please correct Geotechnical sums
Please correct Geotechnical Subtotal sums
Please correct Total sum

Table 4-2:

Under Groundwater (Low), pH, RAS Organics: Please lable first horizontal numerical line as Phase I and second horizontal numerical line as Phase II and continue same throughout the Table.

In Phase II sampling under Frequency Column: This assumes that a second round of Phase II well samples will not be collected. A second round may be necessary. Please include numbers showing this in the Table.

Under Groundwater (Low), pH, SAS VOA, Blank Column, Phase II: Change 1 sample under No. Column to 2, and change 2 sample under Frequency to 1.

Under Groundwater (Low), Temperature, RAS inorganics: Under Investigative No. column change 6 to 2, and under the investigative total column change 6 to 2, and under the matrix total column change 8 to 4 (to match text). Then add a Phase to under RAS inorganic unfiltered: 5 1 5 1 1 1 1 1 1 7.

Under Groundwater (Low), SAS for Alkalinity, Phase II: Under Blank no. column change 1 to 2 and under the Blank freq. column change 2 to 1

Under Groundwater (Low), SAS for Ammonia: Under Blank no. column change 1 to 2 and under the Blank freq. column change 2 to 1.

Flouride analysis: Unless there is a specific reason for performing this test, this may be eliminated.

Under Groundwater (Low), Temperature, SAS for Ammonia, Nitrate-Nitrite, COD: Add TOC.

Under Private Wells (Low): Increase number of wells to be sampled. Please see comment for Page 4-8, Section 4.2.2.

Under Leachate: Please sample all 8 of the leachate wells, not just 4.

Under Leachate, Temperature, SAS for Ammonia, Nitrate-Nitrate, COD: Add TOC.

Under ACS Effluent, Temperature, SAS for Ammonia, Nitrate-Nitrite, COD: Add TOC.

Under Surface Water (Low) and Sediment (Low): How many Investigative samples under the no. column will be taken 10 or 11? See text and Figure 4-1.

Table 4-3:

Please add number of Blanks for each sampling episode. Zero blanks is not acceptable.

Phase I, Waste Pit: Change Investigative from 6 to 12 and Duplicate from 1 to 2.

Phase I, Waste Boring: Change Investigative from 8 to 16 and Duplicate from 1 to 2.

Chemical Subtotal: Change Investigative from 48 to 62 and Duplicate from 7 to 9. Also, add blanks.

Phase I total: Change 55 to 71

Table 4-4:

Please add number of Blanks for each sampling episode. Zero blanks is not acceptable.

Add SAS TOC to: 1) Natural Soils Waste Pits (low) and 2) Natural Soils - Waste Borings (Low)

Waste Pits (Med), Investigative Samples, RAS organics and RAS inorganics/ metals and cyanide, change 6 to 12 and change from 6 to 12 Investigative Totals. Under QA Samples Duplicate, RAS organics and RAS inorganics/ metals and cyanide, No. change 1 to 2 and Total change 1 to 2. Under Matrix, RAS organics and RAS inorganics/metals and cyanide Totals change 7 to 14.

Waste Borings (Med), Investigative Samples, RAS organics, RAS inorganics/ metals and cyanide, Investigative samples No. change 8 to 16 and Totals change 8 to 16. Under QA Samples duplicate, RAS organics, RAS inorganics/ metals and cyanide, No. change 1 to 2 and Total change 1 to 2. Under Matrix, RAS organics and RAS inorganics/metals and cyanide Totals change 9 and 8 to 18.

Soil Borings (Med), RAS organics, RAS inorganics/metals and cyanide, QA sample duplicate No. change 1 to 2 and totals change 1 to 2. Under Matrix Total RAS organics, RAS inorganics/metals and cyanide change 13 to 14.

Table 5-1:
See comments for pages 5-1 through 5-17. Also, remember to consider pathways and migration routes both present and future when screening the remedial action technologies under 2.0.

Figure 2-1:
The text refers to six monitoring wells, yet this Figure, as well as subsequent Figures, show only 3 monitoring wells. However, there are also 3 test wells identified. Clearly state the difference or adopt one uniform manner of referring to the old wells.

Figure 4-1: The legend does not contain a symbol for monitoring wells. Please show marshes and home locations. Also, if possible, show building locations. MW-3 and MW-4 and MW-4D were not discussed in the text. Identify the Drainage Ditch in the legend. A comparison of this Figure to the text also reveals the following: 1) there will only be 2 piezometers and one surface water point east of Colfax Avenue, 2) there is no investigative work planned east of the Kapica and ACS property but south of the C&O railroad, and 3) no work is planned for the marsh north of the Grand Trunk tracks. Further explanation of these areas is necessary, i.e., these areas may be addressed in later phases but this should be stated. Also, a comparison of this Figure with the text reveals that a surface water point is proposed for the center of the Griffith Landfill. Please show this location on the map and discuss this in the text.

Figure 4-2: The proposed monitoring wells around the periphery of ACS should be placed closer to the site, unless additional explanation for this placement is given in the technical section of the text for this placement.

Figure 4-3: Location 11 is not shown but the text description is correct. Please show this on the map. No. 3 proposed surface and sediment sampling point should be moved north of the tracks. What are the differences between surface water points as shown in Figure 4-1 and surface water sampling points as identified in Figure 4-3?

Figure 4-5: Please explain what is a soil area. Are these soil areas the same as a surface soil sample? Also, there is a soil area located immediately west of E while Figure 4-4 shows a waste pit in that same location.

Figure 6-1: U.S. EPA review of documents should mirror the time frames established in the consent decree which is 30 days. No submittals to the U.S. EPA are shown after Phase I or Phase II. Some sort of report summarizing the Phase and recommending further action is necessary after both Phases. Also, please incorporate a schedule for the FS.

In addition to the above comments, please indicate when and at what point the pilot studies that may be required for specific alternative analysis will be scheduled.

These comments should be easily addressed and incorporated into the work plan. If you have any comments or questions, please call Karen Waldvogel at (312) 886-4741.

Sincerely yours,

Karen Waldvogel Daniel Caplice

Karen Waldvogel, RPM, CERCLA Enforcement
Dan Caplice, RPM, CERCLA Program

cc: C. Puchalski, ORC
J. Adams, Warszyn